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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,071	06/01/2001	Wayne D. Jung	JJL9602E	3776

7590 02/12/2004

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EXAMINER	
LEWIS, RALPH A	

ART UNIT	PAPER NUMBER
3732	6

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/872,071	JUNG ET AL.	
	Examiner	Art Unit	
	Ralph A. Lewis	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2-121 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 2-121 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Priority claim unclear - Status as Continuation Application

It is noted that this application was filed with a paper ("Utility Patent Application Transmittal" form) indicating that it was a continuation of Application No. 08/909,664, filed August 12, 1997, now patent 6,264,470 B1 (which was a continuation of 08/582,054 filed Jan 02, 1996, now patent 5,759,030 – there is no reference to this earlier application). A reference to the prior applications must be inserted as the first sentence of the specification of this application or an application data sheet, if applicant intends to rely on the filing date of the prior application(s) under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. Also, the current status of all nonprovisional parent applications referenced should be included.

If the application is a utility application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the

filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Rejections based on Obvious-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-48 of U.S. Patent No. 5,880,826. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '826 set forth a method wherein an image of a dental object is generated with a camera (e.g. patented claim 17), processing the image to a plurality of regions having different optical characteristics (e.g. patented claim 19) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 16 and 19). In regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 16. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-86 of U.S. Patent No. 5,926,262. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '262 set forth a method wherein an image of an object is generated with a camera (e.g. patented claim 17), processing the image to a plurality of regions having different optical characteristics (e.g. patented

claim 19) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 16 and 19). Patented claim 20 teaches the "dental" limitation and in regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 16. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-166 of U.S. Patent No. 6,188,471. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '471 set forth a method wherein an image of an object is generated with a camera (e.g. patented claim 17), processing the image to a plurality of regions having different optical characteristics (e.g. patented claim 19) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 16 and 19). Patented claim 24 teaches the "dental" limitation and in regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 16. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-166 of U.S. Patent No. 6,222,620 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '620 set forth a method wherein an image of an object is generated with a camera (e.g. patented claim 17), processing the image to a plurality of regions having different optical characteristics (e.g. patented claim 19) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 16 and 19). Patented claim 24 teaches the "dental" limitation and in regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 16. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-134 of U.S. Patent No. 6,249,340 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '340 set forth a method wherein an image of an object is generated with a camera (e.g. patented claim 17), processing the image to a plurality of regions having different optical characteristics (e.g. patented claim 19) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 16 and 19). Patented

claim 24 teaches the "dental" limitation and in regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 16. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-202 of U.S. Patent No. 6,254,385. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '385 set forth a method wherein an image of a dental object is generated with a camera (e.g. patented claim 1), processing the image to a plurality of regions having different optical characteristics (e.g. patented claims 1, 26-28) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 26-28). In regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in claim 1. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-97 of U.S. Patent No.

6,264,470 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '470 set forth a method wherein an image of a dental object is generated with a camera (e.g. patented claim 44), the image is process such that optical characteristics of a plurality of regions of the image are identified (e.g. patented claim 47) and spectral characteristic data of the dental object is determined for the plurality of different regions (e.g. patented claim 37). In regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of the prior art device in obtaining the measured spectrum characteristics referred to in patented claim 37. The patented claims of '470 teach all the limitations of the present claims, merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Claims 2-121 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,573,984 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims of '984 set forth a method wherein an image of an object is generated with a camera (e.g. patented claim 14), processing the image to a plurality of regions having different optical characteristics (e.g. patented claim 16) and generating optical characteristic data indicative of the optical characteristics of the object in the plurality of regions (e.g. claims 1 and 16). In regard to the "spectrophotometer" limitation, the ordinarily skilled artisan would have the use of

the prior art device in obtaining the measured spectrum characteristics referred to in claim 26. Finally, it is noted that merely setting forth the already patented subject matter in the broader terms of the present claims would have been obvious to one of ordinary skill in the art.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-121 are rejected under 35 U.S.C. 102(b) as being anticipated by Jung et al (WO 97/24075).

To the extent that applicant has failed to properly claim or establish priority based on earlier filed US patent applications the present rejection applies.

Claims 28, 83, 91-95, 99, 113 and 114 are rejected under 35 U.S.C. 102(b) as being anticipated by Massen et al (US 5,372,502).

Massen et al disclose the generation of an image of a dental object with an imaging element (column 3, lines 33-37), the generated image is processed bya computer (i.e. "software")(column 3, line 37), optical characteristic data is generated of

the dental object (column 3, lines 37-40), the software determination is made in a plurality of regions (i.e. pixels column 3, line 40).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 85-90, 96-98, 100-102, and 104-112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massen et al (US 5,372,502).

The use of audio signals (e.g. beeps) on computer controlled equipment to alert the user of operating conditions is convention and the use of such on the Massen et al system would have been obvious to one of ordinary skill in the art. One of ordinary skill in the art would have found it obvious to have used the Massen et al device a plurality of times, to have used it for more than one patient and to have stored the data received as a matter of routine practice.

Request for Information

It is noted that the present application has subject matter common to numerous other patents and applications by the same inventors, if the present claims are similar in scope (i.e. contain essentially the same elements) to any previously rejected claims,

then it is requested that applicant assist the examiner in providing information where such a rejection was made and under what basis.

Prior Art

Applicant's information disclosure statement of April 20, 2001 has been considered and an initialed copy enclosed herewith.

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(703) 308-0770.** Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (703) 308-2582.

R.Lewis
February 9, 2004

Ralph A. Lewis
Primary Examiner
AU3732